

## NEW EDITOR!

The Club has a new editor - Tamara Leitch will be taking over after the next issue. I am sure she will do a great job and I hope all club members will provide her with lots of material and loads of support and encouragement. Henceforth all articles should be sent (preferably by email) to her. Address and email details can be found on the inside back cover).

My thanks go to all contributors, and helpers in other ways over the years. GB (Ex-ed!)

## THE GREAT VICTORIA DESERT

Harold Ross is a member of the Friends of the Great Victoria Desert Parks. On October 31, 2014, he gave an overview of the Great Victoria Desert which occupies 424,000 sq. km. north/south between the Northern Territory border and the Nullarbor, and east/west from the Stuart Highway to Laverton, about 650 km. into Western Australia. It covers the tribal lands of 3 aboriginal groups – Pitjantjatjara, Maralinga-Tjarutja and Ngaanyatjarra.

Great Victoria Desert dominant landforms are open sand plains of Mulga between sand ridges and Spinifex dunefields, with lesser areas of ranges, gorges, breakaways, stony rises capped by calcrete and playa lakes. Annual rainfall is 200-250 mm, but is unreliable. Summer temperatures range from 30°C to 40°C, winter in the low 20's°C. The Desert is a World Wildlife Fund Eco-region and one of fourteen World Biosphere Reserves.

Aboriginal associations date from 24,000 years ago. Traditionally aboriginals lived in small family nomadic hunter/gatherer groups, but now they live in communities. Native wells, soaks and lakes provided water. One photograph on a rise showed a tribal meeting place with demographic areas marked out with stones.

European exploration commenced in 1856. Giles' 1875 and Elder's 1891 expeditions are perhaps the best known, with at least a dozen expeditions in the 19<sup>th</sup> century and more into the 20<sup>th</sup>, even up to 1932. Various expeditions covered regions of the Desert and for different purposes such as

exploration, pastoral, prospecting, surveying and scientific. Other European activities include sandalwood harvesting, petroleum exploration, road building, atomic testing and mining for diamonds, uranium, coal, opals, gold, nickel, copper, chromite and mineral sands.

Birds common in the Desert include the Brown Falcon, Ringneck and Mulga Parrots, Crested Bellbird, Splendid and Variegated Fairy-wrens, Honeyeaters (5 species), Black-faced Wood-swallow and White-browed Babbler. There were photographs of a Brown Falcon, Australian Bustard and Owlet-Nightjar. Uncommon birds include the Malleefowl, Australian Bustard, Princess and Scarlet-chested Parrots and Pink Cockatoo.

Mammal species include the Mulgara, Dunnart, Sandy Inland Mouse, Mitchell's Hopping-mouse, Marsupial Mole, Bats (such as the Greater Long-eared Bat), Short-beaked Echidna, Ningau, Kangaroo, Dingo and the expected array of feral animals.

The Desert is one of the richest regions for reptile fauna for it contains Mulga and Western brown snakes, Blind snakes, Goannas, Dragons (such as the Bearded dragon), Skinks (over 30 species), Geckos and the Thorny devil.

As the area has never been stocked, considerable plant diversity remains. The 3 most successful plant families are the Compositae (daisies), Chenopodiaceae (saltbushes & bluebushes), and Graminae (grasses). The major plant communities are dominated by Eucalypts, Acacias and Casuarinas. Harold then screened nearly 50 plant photographs. The most common genera represented were Acacia, Dicrostylis, Eremophila (7 species), Eucalyptus, Goodenia, Grevillea, Hakea, Ptilotus and Senna.

To traverse the Great Victoria Desert permits are required, such as aboriginal land access permits from the Maralinga-Tjarutja people, Defence Department and Parks South Australia. From Coober Pedy to Laverton is about 1,400 km., but as the road is corrugated, travel is slow, so 6 -7 days is recommended. The road is single vehicle



width, but largely along swales, avoiding the need to cross large dunes.

Various books were tabled with a special acknowledgement of *The Great Victoria Desert* by Mark Shephard, published by Reed Books, 1995.

Graeme Rowe

## MORWELL RIVER WETLANDS

It had been raining since sunrise and the expected cold front came through in the early afternoon with gale force winds and frequent showers. In between these two weather events our group of keen expectant bird watchers gathered at Morwell River Wetlands for a morning's bird watching taking advantage of this window of opportunity. The morning proved to be reasonably calm, cloudy but free of rain.

The wetlands had undergone some quite extensive fire damage from the February fires this year but the recent winds had been more destructive. I had done a reconnaissance of the site a few weeks earlier and found at least six trees down over the track which would have made vehicle access impossible and proved difficult to walk around. To the credit of GDF SUEZ Hazelwood the trees had been removed and the grass mown which allowed us access to the water's edge with some good views of the wetlands. The site was dangerous and we did experience at least one heavy branch descend from a tree.

The wetlands proved to be quiet compared with previous visits but still provided some interesting and unexpected occupants. There were the usual duck species including black duck, wood duck, Chestnut and grey teals but Ken found three pink-eared ducks when he went on ahead and had a photograph to prove it. This was a species I had not seen on the wetland before and prefers large bare lakes such as sewerage farms and usually congregates in large flocks. There was also a strange hybrid mallard on the wetlands which had drab plumage and larger than mallard - one of its parent species although the other parent species remains a mystery. It should also be noted that the Club's excursion a few weeks earlier found a freckled duck on the wetlands.

We caught a brief glimpse of an adult white-tailed sea-eagle flying through the foliage as we walked down the track. The naming of these birds is confusing because they are equally found on inland lakes, rivers and wetlands as they are on the coast. They are quite a common bird on our wetlands and I usually see one on other wetlands. On this visit we later found an immature bird sitting on a branch close to an adult bird. The immature bird was most likely a second immature. Although the immature plumages can be quite variable the bird had a characteristic mottled dark brown 'V' shaped band across the breast but the rest of the underbelly was paler than a juvenile or first immature bird. Other birds of prey included up to three swamp harriers giving a constant presence and a single whistling kite.

We spent some time watching a pair of spotted pardalotes actively flitting among the branched along the river. The sexes can be differentiated because the female lacks the yellow throat of the male. Our patience was rewarded because we eventually found the location of their nesting burrow on the opposite river bank.

On returning to the car I was struck by an unusual call which we soon found the owner was a fan-tailed cuckoo. The call was a shrill high pitched 'chiree' which HANZAB describes as one the three calls by this species. The other two are a downward trill and a soft whistle with an upward inflexion. The chiree call is often given by the female prior to mating and we were able to watch both birds from their interrupted activities.

Other birds of interest were both recently arrived tree and fairy martins flying with the welcome swallows. We were continuously serenaded by both golden and rufous whistlers and intermittently by eastern whipbirds.

Following lunch a smaller group went on to the bird hide at Brodribb Road. The wetlands were quiet and we waited some time before we spotted our first black duck and chestnut teal. The only other occupants on the water were a pair of black swans and both species of grebes – Australian and hoary-headed.



The other reason for our visit to these wetlands was to see the orchids in the unmown paddocks. We were able to find several *Thelymitra* (sun orchids) that Ken identified. They were not in flower but there were probably two species, both of which were in the *Thelymitra nuda/Thelymitra pauciflora* group and the *Microtis* were all *Microtis unifolia*, the Common Onion Orchid.

## Bird List for Morwell River Wetlands

Black Swan	Yellow-faced Honeyeater
Pacific Black Duck	White-eared Honeyeater
Grey Teal	New Holland Honeyeater
Chestnut Teal	Eastern Yellow Robin
Australian Wood Duck	Eastern Whipbird
Pink-eared Duck	Golden Whistler
Mallard (hybrid?)	Rufous Whistler
Australian Pelican	Grey Shrike-thrush
Purple Swamphen	Grey Fantail
Eurasian Coot	Magpie-lark
White-faced Heron	Blk-faced Cuckoo-shrike
Great Egret	Grey Butcherbird
Whistling Kite	Australian Magpie
White-bellied Sea-eagle	Australian Raven
Swamp Harrier	Red-browed Finch
Fan-tailed cuckoo	Goldfinch
Shining Bronze-Cuckoo	Silvereye
Superb Fairy-wren	Welcome Swallow
White-browed Scrub-wren	Tree martin
Spotted Pardalote	Fairy Martin
Brown Thornbill	Common Blackbird
Red Wattlebird	Common Starling

## Bird List for Brodribb Road

Australian Grebe	Red Wattlebird
Hoary-headed grebe	New Holland Honeyeater
Black Swan	Yellow-faced Honeyeater
Black Duck	Grey Fantail
Chestnut Teal	Black-faced Cuckoo-shrike
Coot	Reed-warbler
Swamphen	Welcome Swallow
Horsfield's Bronze-Cuckoo	Common starling
Superb Fairy-wren	Little Raven
David Stickney	

## SOLVING THE MYSTERIES OF SOME OF OUR AVIAN LONG DISTANCE MIGRANTS

**Ken Gosbell, 28 November 2014**

Ken introduced the shorebirds of the Asian-Australasian flyway with photographs of individual birds and flocks at Roebuck Bay, Broome, WA where half a million shorebirds pass through, or are resident, each year. The East Asian-Australasian flyway is the largest and the most threatened in the world. Ken illustrated his presentation with photographs of shorebirds, their habitats, methods used to gather information, and a range of maps, graphs and diagrams showing details of their migratory routes, life cycles and population trends.

Northern hemisphere migrants, such as Bar-tailed Godwit, Great Knot, Red Knot, Ruddy Turnstone, Red-necked Stint, and Eastern Curlew are in Australia from August/September until March/April. In February/March, in preparation for breeding, the birds begin to develop their breeding plumage. They gain fat, their fuel for the journey, almost doubling their weight. Their route takes them over Indonesia, China, Korea and, for most, to Russia or Mongolia, while some breed in Alaska. They travel approximately 13,000 kilometres calling in at 'stopover sites' to feed, replenishing their fat. Many species rely heavily on the feeding grounds of the Yellow Sea to prepare for their final several thousand kilometre flight to their breeding grounds. By now the birds look very beautiful in their breeding plumage – they are no longer 'grey waders'. Ken commented that these birds, their migration and their life cycle so finely attuned to the seasons, are one of the wonders of the world.

The birds arrive at the tundra as the snow melts. Well camouflaged, they nest on the ground. Within six to ten days of arrival the females lay the first of a clutch of two to four eggs. These hatch in 20–22 days. Shortly after, one parent sets off for the south while the other guards the chicks for four or five weeks before also leaving for the south. The chicks feed themselves on the rich supply of insects until they fledge and, before the snow covers the tundra, they too



fly south, driven by an instinct 'I've got to go south'. Many individual birds repeat the yearly migratory cycle for 18 to 21 years.

## **How have we (humans) solved the puzzles of shorebird migration?**

### **1. Use of coloured leg flags**

In Australia in the mid-1970s volunteers began capturing and banding birds with numbered metal leg bands. Later, in addition, we began placing coloured plastic flags on the other leg. These are colour-coded, indicating the location where the flag was added. Sightings were then mapped and provided some new information about migratory routes.

### **2. Geolocators**

These, weighing less than 1 gram, are glued to the leg-flag of selected birds. A geocator contains a battery, a hard disc, a clock and a light gathering instrument. It records the date, the real time and a light value every 2 minutes. With luck, it is possible to recapture the bird following the northern migration and, with a lot of hard work, to download and interpret the information. It is possible to plot the pathway taken, the location of stopover sites, the timing of the journey and to get a rough indication of the location of the breeding area. Ken has been involved in this since the Victorian Wader Study Group began placing geolocators on Ruddy Turnstone at Flinders in 2009. Ken showed pictures of the routes taken by several individual Ruddy Turnstones - round trips of 27,000 kilometres - superimposed on 'Google Earth' views of the globe. More recently, studies have involved the Greater Sandplover migrating between Broome and Mongolia and Sanderling from Southeastern Australia, which, like Ruddy Turnstone, breed in Northern Siberia. The newer geolocators measure temperature and this provides information about the length of time the bird incubates and broods. If a bird incubates for 21 days we assume it was probably successful. If the first attempt is short (unsuccessful) the bird often lays again about six days after the first attempt failed.

### **3. Satellite transmitters**

These are solar powered and weigh 5 gram. Five of them were placed on Little Curlew leaving from the grasslands around Broome in 2014. There is no need to recapture the bird in order to download the data. This method has enabled us to map the migratory route and the breeding grounds in Northern Siberia. Satellite tracking has also yielded information about the two sub-species of Bar-tailed Godwit: the sub-species that migrates to Australia breeds in Northern Siberia while the sub-species that migrates to New Zealand breeds in Alaska. Bar-tailed Godwit return from Alaska to New Zealand, 11,700 kilometres, in an eight-day non-stop flight.

## **Why do this?**

1. Science: people are curious.

2. Shorebirds are under threat and we need to understand their needs for conservation purposes. Knowledge of the stopover sites and breeding areas provide a focus for conservation. Almost all species are in severe decline - for example, the Eastern Curlew is declining by 5-8% per year. The declines are largely due to loss of habitat in stopover sites in places such as the Yellow Sea and Bohai Bay. Major threats are loss of links in the chain of highly productive wetlands used as stopover sites. These result from habitat change to rivers and reclamation of tidal flats. Other threats include competition from fishing and development, habitat change in non-breeding areas such as Australia, climate change and disease.

The Yellow Sea, between China and Korea, is a major stopover site. The mud is rich in biota, but dams on the Yellow and Yangtze Rivers and the huge amount of development on land 'reclaimed' has severely reduced the habitat available to the shorebirds. South Korea built a sea wall, completed in 2008, reclaiming 40,000 ha of land from what was once a major stopover site for tens of thousands of shorebirds. Evidence was gathered showing that there is no alternative habitat for the shorebirds.

We are learning more, and through sharing our knowledge we have gained the support of international organisations, such as the Ramsar Convention, which has a mandate to



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work at an international level for the conservation of birds and their habitat. Representatives of the East Asian-Australasian Flyway including representatives of Government and NGOs meet 15-18 monthly and try to get some conservation measures in place in China and Korea, but this is slow. Australia has agreements with Japan, China and the Republic of Korea but these are often not taken seriously. We now have the evidence needed to convince governments of the serious situation.

## Notes from replies to questions:

Shorebirds fly at speeds of 50 – 60 kph and are thought to fly at altitudes of 2,000-4,000 metres. Our Federal Government is under obligation to care for international shorebirds, while State and Local Governments are responsible for resident shorebirds.

Margaret Rowe

## REPORT ON BUSINESS MEETING HELD 23.2.2015

### General Meetings & Excursions

**Friday 27 March: AGM.** Lower Latrobe Meander Restoration – Matt Bowler

**Saturday 28 March: Note change** – Herb Guyatt Reserve and other wetlands, Sale. Meet 10am at Rosedale main street carpark.

**Friday 24 April: Note change** - Genetics of the Strzelecki Koala – Faye Wedrowicz

**Saturday 25 April: Note change** - Morwell NP, Fosters Gully. Meet 10am Kerry Rd carpark.

**Botany Group:** Saturday 4 April: Plant structure microscopy at Trafalgar HS. Contact: Wendy Savage ☎ 5634 2246.

**Bird Group:** Tuesday 7 April: AP Maryvale Ponds. Meet 9.30 at AP carpark. Please let Alix know in advance. Contact: Alix Williams ☎ 5127 3393, [alixw@spin.net.au](mailto:alixw@spin.net.au).

**Finance** – Cash Mgt Trading A/c \$3027.36. Term Deposit \$14,386.10.

2015-16 membership rates:

Single \$25 (posted), \$20 (electronic);

Family \$40 (p), \$35 (e);

Student/Naturalist only \$10 (p), \$5 (e).

## Business Arising, Correspondence & General Business

Still pending: botany microscope; SEANA risk management policies.

SEANA Spring camp 2016 – meeting Wed March 11, priorities to set a date for the camp and look at venue for base activities.

Data projector – will purchase a spare bulb, John Poppins to advise.

Citizen Science – EPA Hazelwood Recovery program have appointed Carolyn Boothman to involve community members in this project. Has offered to talk to club and sends flyers of events. Will advertise at GM.

Bairnsdale FNC ‘The Clematis’ will no longer be sent to us as a hard copy as it is available on the web. We will do the same with ‘The Naturalist’.

ANHM nomination is still Ken Harris. Updates required by May1. Our rep is John Poppins. We will write a thankyou letter for his years of service.

SEANA nominations – Phil’s 6 year term is ending in March, we would hope a representative from Sale FNC would take his place.

Summer Camp at Mallacoota had 37 attendees and 3 days of excursions including a boat trip. Thanks to Wendy, Phil and Alix for organization.

Bird Challenge report – the 2014 results were 116 species and 4664 birds. These figures compare favourably with the average of the last 8 years of 122 species and 4580 birds. Far better results than expected considering the wet, windy weather on the day and that two usual sites were not visited.

Edward Hunter development in Wagners Paddock – VCAT have decided in favour of the developers, so it will go ahead. Bruce King was disappointed in the report



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Indigenous Design prepared to support the developers.

Program 2015 – April speaker Harley Schinagl requested change of date, but this couldn't be accommodated so a new speaker has been arranged. Faye Wedrowicz will talk on her PhD project on Genetic Analysis of the Strzelecki Koala Population using DNA isolated from scats. Harley will go in reserve or on 2016 program.

2015 brochure has been prepared, David S will arrange printing.

AGM planning – positions vacant are President, VP 1, Treasurer, Assistant Secretary.

Naturalist changes for 2015 – President, Editor and new editor Tamara Leitch have met to plan the transition to the new editor and the planned changes to support the electronic version. Gill will produce March/April issue and Tamar will do May/June. Appreciation is expressed to Gill for 22 years as Editor.

Lichen brochure sales are more than 90. Will send copies to libraries etc. as required.

## Conservation Matters

Blue Rock Dam proposed changes – Julie Parker requested Club put in an objection. Jackie will read material Julie supplied and decide our action.

## AGM 27 MARCH 2015

Positions vacant will be:

President      Vice President 1

Treasurer      Assistant Secretary

## GUEST SPEAKER FOR APRIL

**Faye Wedrowicz** is a PhD researcher at Monash University. Less than 100 years ago, the Victorian koala was on the verge of extinction. Subsequent management strategies, involving extensive translocation, have restored population numbers, but reduced levels of genetic diversity. Koalas in the Strzelecki region are believed to have greater levels of genetic variation due to the survival of a small remnant population and a lack of translocations to the area. Increased genetic diversity could provide the

Strzelecki population with a greater chance of survival if faced with adaptive pressures such as climate change or disease.

Faye's research investigates this population, using genetic methods and DNA isolated from scats to estimate the population's approximate distribution, size and level of genetic diversity. Her study is providing information to inform future management strategies for Koalas in the Strzelecki region and across Victoria.

## GUEST SPEAKER FOR MAY

**Mary Cole** is a guest lecturer in Viticulture & Oenology at Goulburn Ovens Institute of TAFE, and a director, principal scientist and Consultant Mycologist/Plant Pathologist for the company Agpath P/L. She is a locally and internationally recognized mycologist, having worked in the field for more than 30 years, previously as an academic at Monash, Melbourne and Charles Sturt Universities.

Her talk is on The Importance of Fungi in Carbon Management. Fungi, in particular mycorrhizal fungi, help to make good soil. A healthy soil has good aeration, organic matter and biota to depth allowing for healthy plant growth. Humus has been seen as the major carrier of carbon in the soil, but recent research has shown that a metabolic by-product of mycorrhizal fungi has the capacity to hold far more carbon for a longer period than does humus. Common farming practices and chemicals destroy this capacity. Minimizing or removing cultivation and artificial chemicals from farming operations and using minimal tilling together with composting helps to regenerate the role and populations of soil microbes that are present for long-term soil health.

## WELCOME TO NEW MEMBER

The club welcomes Charles Ward from Newborough. We wish you a long and happy association with us.

## ***DON'T FORGET***

*Daylight Saving ends at 2am Sunday  
April 5. Put clocks back 1 hour.*